

Management

and

uses

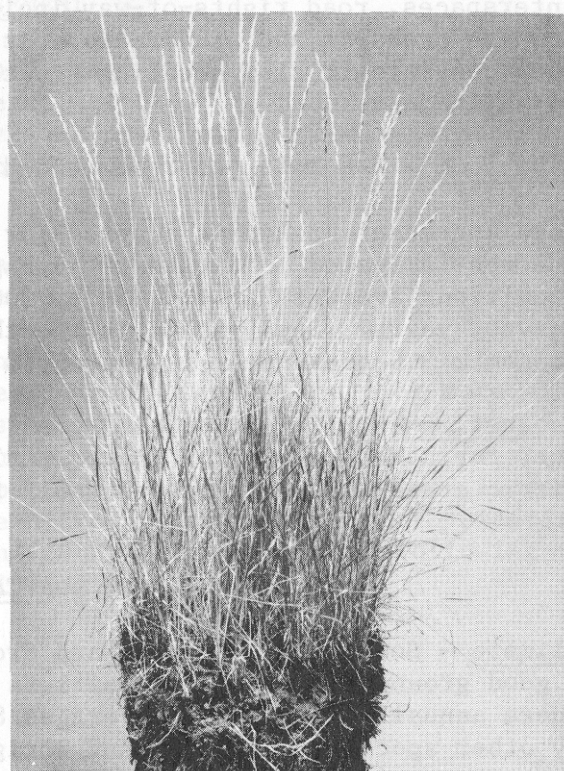
of

'SODAR'

STREAMBANK

WHEATGRASS

wheatgrass, 'Sodar' streambank



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In Idaho, Nevada, Utah

'Sodar' wheatgrass, *Agropyron riparium* Scribn. and Smith, is a native selection cooperatively released in 1954 by the Soil Conservation Service and the Idaho and Washington Agricultural Experiment Stations.

Although called streambank wheatgrass, this low-growing, sod-forming, perennial native wheatgrass has excellent drought tolerance. Sodar sods vigorously once established. The leaves are short, narrow and dominately basal. Numerous, moderately-short stems and seed heads are produced during the first 2 to 3 years, or until it becomes fully sodded; thereafter, few stems are formed. Seed heads are mostly awnless, glaucous to pubescent, and seeds shatter readily at maturity. Sodar establishes readily from seed but does not become a weed. Mature plants are easily killed by normal tillage operations.

USES

Erosion Control - Sodar was selected primarily for erosion control. Its low growth form, vigorous sod, and low maintenance requirements makes it an ideal plant for ground cover and soil stabilization within its area of adaptation. Often called "one-bite" or "no eatem", Sodar is not readily eaten by livestock and its low forage yield plus a relatively long green period provides little fire hazard. Once established, it provides an effective barrier to weed invasion. It has been effectively used on canal

and ditch banks, reservoir berms, fence rows and vacant lots, airport interspaces, road rights-of-way including cuts and fills, and as a cover crop in orchards and windbreaks. Its use in waterway seedings has not been consistent; slow seedling growth has permitted washout prior to establishment.

Livestock - Sodar is not recommended for forage production.

Seed Increase - Sodar is adapted for seed increase under both irrigated and non-irrigated conditions. Average yields under good irrigation conditions averages around 250 to 300 pounds per acre for the first two harvest years. Seed yields in the third harvest year are not normally economic. Seed shatter is a problem.

Recreation - Sodar provides a good, moderately dense, low-maintenance turf for non-irrigated or infrequently irrigated playgrounds, farmyards, picnic areas, airport runways, golf fairways, etc.

ADAPTATION

Climate - Sodar is cold hardy and drought tolerant. It will establish a good ground cover in areas of less than 120 frost-free days (32° F) where annual precipitation averages 8 inches. Sodar is normally replaced by other species under frequent irrigation or high rainfall.

Soils - Soil adaptation ranges from shallow to deep, moderately coarse to fine textured, well to moderately well-drained, and weakly acidic to moderately saline-alkali. It is not tolerant of wet or poorly drained soils.

ESTABLISHMENT

Seedbed - Plant only in clean, firm and moist seedbeds. Irrigate as needed to insure establishment.

Seeding - Plant in pure stands in late fall where annual precipitation averages less than 12 inches. Seedings made in early spring in higher rainfall areas and on soils subject to crusting or heaving have been most successful. Broadcast seedings have not been consistently successful. The deep-furrow drill has been most effective under arid conditions.

Seeding rates of 6 to 8 pounds per acre have been very adequate for drill seedings. The rate should be doubled for broadcast seedings. For seed increase, plant at the rate of 3 pounds Foundation or Registered seed per acre in rows spaced at least 30 inches apart. Seeds should be planted at 1/2 inch depth or less. The average seed weight is 22 pounds per bushel and there are 170,000 seeds per pound. Seeded at 1 pound per acre, there are 3.9 seeds per square foot. Seeded at 6 pounds per acre in 6-inch drill-rows, there are 11-12 seeds per linear foot of drill row.

MANAGEMENT

Control weeds by mowing prior to bloom stage or by spraying, or by cultivation (seed increase). Leave at least 4 inches of Sodar stubble to maintain plant vigor. Do not apply 2-4-D until after seedlings have 4 or more leaves, or to seed production fields during the period of booting until after seed harvest.

Protect all seedlings from grazing until they are fully established and to maintain adequate growth for cover and soil protection.

Apply nitrogen as needed to maintain plant vigor. Nitrogen is not normally needed for non-irrigated seedlings until they are 6 or more years old or vigor declines. The establishment of seedlings made on infertile cut or fill soils may be helped with single applications of 20-30 pounds of available nitrogen per acre. For irrigated seed increase fields, apply 30-40 pounds available nitrogen per acre prior to planting or soon after seedling emergence, and 60-80 pounds per year following the first seed harvest for each following crop.